



مركز الملك عبدالله للدراسات والبحوث البترولية
King Abdullah Petroleum Studies and Research Center

Finance and Investment in Energy Efficiency

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01/01/2015

Types of investment that improve energy efficiency

“Energy Efficiency investments”

Retrofits to buildings, industry, transport or energy facilities with **sole purpose of improving energy efficiency**



“Normal investments”

Investments in new buildings, industry, transport or energy facilities **within the existing structure of the economy** that have higher than average energy productivity in their sector



Refurbishments to buildings, industry, transport or energy facilities with **non-energy purpose** but which include an element of energy efficiency improvement



Investments that **change the structure of the economy** towards less energy intensive industries



Financing energy efficiency improvement

Financing energy efficiency is an emerging area of interest globally

Energy efficiency is often economic but not investable for a number of reasons including:

- Small project size
- High transaction cost
- Hard to measure the results
- Lack of standardization in project development and documentation
- Energy efficiency is not strategic for most organizations – therefore low priority
- Lack of capacity in financial institutions

But there is:

Growing interest from institutional investors

- Alliance of Energy Efficiency Financing Institutions
- Energy Efficiency Financial Institutions Group (EU/UNDP)

Growing interest from policy makers at international, national, regional and municipal levels

- G20, EU, most countries, many regions and cities

To accelerate investment into energy efficiency

Providing finance is not enough

For success you need:

Finance – both project finance and project development finance

Development of a robust & committed project pipeline

Capacity building within end-users, the energy efficiency industry and the financial sector

Standardization of the development process, documentation, contracts and measurement of results



The jigsaw of energy efficiency financing

Sources of investment

Public – traditional approach

- Efficiency regarded as something that has to be public expenditure
- Efficiency regarded as something different to energy supply
- Direct government expenditure or through utility mandates:
 - Tax breaks or subsidies of some form
 - Low interest loans
 - Creation of public funds to invest in efficiency projects
 - Mandate on utilities to invest into energy efficiency

Private – emerging approach

- Investment requirement is larger than available public funding in many countries
- Institutional investors looking for yield and environmental investments
- Nascent market everywhere but growing interest and activity
 - Creation of specialized energy efficiency funds
 - Commercial banks making allocations to efficiency
 - Moves towards standardization

Specialized energy efficiency funds

Examples from around the world

- European Energy Efficiency Fund (EEEF)
 - Variety of instruments to benefit public sector bodies
- UK Green Investment Bank funds
 - Variety of instruments for public or private sector entities
- London Energy Efficiency Fund
 - Low interest loans for public and private sector in London
- China Utility Based Efficiency Finance (CHUEE)
 - Provides first loss guarantees for IFC loans extended through 3 Chinese banks
- Argentina Energy Efficiency Fund
 - Public – 100% IFC funded
 - SME focused, low interest loans
- Thailand ESCO Fund
 - Public funding - Thai government
 - Equity or debt for ESCO projects

Established as an instrument of policy in response to perception that the problem is “lack of finance” – publicly funded or led by public sector

Support development of market infrastructure

The efficiency financing market needs infrastructure

Standardization of project development & documentation

- Investor Confidence Project in US & EU – standardizes development process & documentation
- Measurement and Verification Protocols such as IPMVP

Standardization of contracts

- Model documents for Energy Savings Performance Contracts (US DoE)
- Various EU initiatives to standardize contracts (public and through frameworks)
- Dubai initiative on ESCO regulatory framework

Evidence base of energy efficiency project performance

- eProjectBuilder (US DoE) – designed for ESCOs
- Building Performance Database (US DoE) – 870,000 residential and commercial building records
- Energy Efficiency Financial Institutions Group derisking project (EU)

Financial sector capacity building

- EIB Private Finance for Energy Efficiency (P4EE) capacity building project
- Various development banks (EBRD, ADB)

Case study – US Aluminum Industry Federation

Developing Sensible Legislation and Regulation

The aluminum industry is investing in new research to help federal policymakers understand the industry's contributions to energy efficiency.

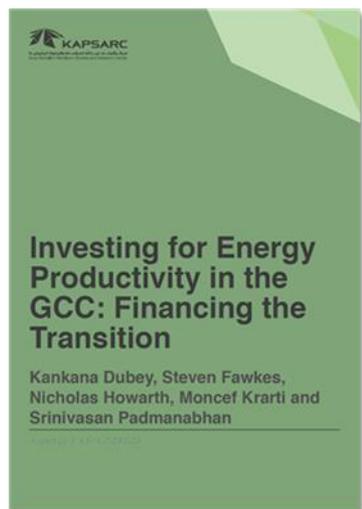
Overly burdensome regulations can needlessly increase energy costs, hurt the aluminum industry's global competitiveness and drive companies out of business.

Energy policies that do not take energy intensive industries like the aluminum industry into account and negatively impact energy costs will put the industries at a disadvantage against foreign competitors.

The aluminum industry is dedicated to working with federal policy makers on common sense policy to address energy policy while protecting a vibrant manufacturing base.



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